

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): A zinc can for battery anode, ~~said can has~~
having a covered bottom and cylindrical shape, and
~~made from an active material for battery anode which material composition is from a~~
metallic composition comprising:
98.7 percent by mass to 99.8 percent by mass of zinc,
0.01 percent by mass or more and 0.7 percent by mass or less of bismuth,
1 ppm or less of antimony,
70 ppm or less of lead, and
20 ppm or less of cadmium;
~~which material metal structure~~
wherein said zinc can has a metal structure in a cross section of said can wall being
cut in the direction of height and thickness consists of crystal which average grain diameter is
8 μm or more and 25 μm or less as measured on a projected image of said crystals on a
horizontal line in a thick direction of the can which average grain diameter is computed out;
and
wherein said zinc can is formed by pressing at a temperature in the range of 120-
180°C.

2. (Currently Amended): The zinc can for battery anode according to claim 1,
wherein the active material ~~contains~~ further comprises from 0.0003 to 0.003 percent by mass
of magnesium in addition.

3. (Currently Amended): A zinc can for battery anode according to claim 1 ~~or claim 2~~, wherein the crystals of material structure have an O/I ratio ranging constitute a ratio (O/I ratio) of from 1.0 to 1.4, (O) representing where O represents an average grain diameter of the crystals existing vertically epitaxial to the height direction on a cross section being cut in the height and the thickness direction in a range of 200 μm from the outer surface of the can wall and ~~(I) being~~ I represents the average grain diameter of the crystals existing in a cross section within 200 μm from the inner surface, being said diameters measured on a projected image of the crystals on a horizontal line in the thickness direction, which average value for O and I being computed out.

4. (Withdrawn): A manganese dry battery with an anode zinc can with covered bottom and cylindrical shape made from an anode active material which material composition is 98.7 percent by mass or more and 99.8 percent by mass or less of zinc, 0.01 percent by mass or more and 0.7 percent by mass or less of bismuth, 1ppm or less of antimony, 70ppm or less of lead, 20ppm or less of cadmium which material metal structure in a cross section of said can wall being cut in a height and thickness direction consists of crystals of 8 μm or more and 25 μm or less of average grain diameter as measured on a projected image of the crystals on a horizontal line in the thickness direction.

5. (Withdrawn, Currently Amended): ~~[[A]]~~ The manganese dry battery of claim 4, comprising consisting with

natural manganese dioxide as cathode active material, and

zinc alloy as anode active material comprising:

an anode can with covered bottom and cylindrical shape made from alloy for anode active material which alloy composition is 98.7 percent by mass or more and 99.8 percent by

mass or less of zinc, 0.1 percent by mass or more and 0.7 percent by mass or less of bismuth, 1 ppm or less of antimony, 70 ppm or less of lead, 20 ppm or less of cadmium which alloy metal structure in a cross section of said anode can wall being cut in a height and a thickness direction consists of crystals of 8 μm or more and 25 μm or less of average grain diameter as measured on a projected image of the crystals on a horizontal line in the thickness direction.

6. (Withdrawn, Currently Amended): ~~[[A]]~~ The manganese dry battery of
claim 4 comprising consisting with

electrolytic manganese dioxide as cathode active material, and
zinc alloy as anode active material comprising:

an anode can with covered bottom and cylindrical shape and made from alloy for anode active material which alloy composition is 98.7 percent by mass or more and 99.8 percent by mass or less of zinc, 0.01 percent by mass or more and 0.7 percent by mass or less of bismuth, 1 ppm or less of antimony, 70 ppm or less of lead, 20ppm or less of cadmium which alloy metal structure in a cross section of said anode can wall being cut in a height and a thickness direction consists of crystals of 8 μm or more and 25 μm or less of average grain diameter as measured on a projected image of the crystals on a horizontal line in the thickness direction.

7. (Withdrawn, Currently Amended): The manganese dry battery according to claim ~~4 5 or claim 6~~, wherein the anode active material contains from 0.0003 percent by mass to 0.003 percent by mass of magnesium in addition.

8. (New): The zinc can of claim 1, wherein said crystals have an O/I ratio ranging from 1.0 to 1.4, where O represents an average grain diameter of the crystals existing

vertically epitaxial to the height direction on a cross section being cut in the height and the thickness direction in a range of 200 μm from the outer surface of the can wall and I represents the average grain diameter of the crystals existing in a cross section within 200 μm from the inner surface, being said diameters measured on a projected image of the crystals on a horizontal line in the thickness direction, which average value for O and I being computed out.

9. (New): The zinc can of claim 1, wherein said metallic composition further comprises 0.001 percent to 0.05 percent by mass of at least one element selected from the group consisting of zirconium, indium and aluminum.

10. (New): The zinc can of claim 9, further comprising from 0.0003 percent by mass to 0.003 percent by mass of magnesium.

11. (New): The zinc can of claim 9, further comprising more than or equal to 0.001 percent by mass and less than or equal to 0.05% by mass of at least one element selected from the group consisting of strontium and barium.

12. (New): The zinc can of claim 1, which is produced by a process comprising deep-drawing of said metallic composition within the temperature range of 120-180°C.

13. (New): A zinc can for battery anode having a covered bottom and cylindrical shape, and made from a metallic composition consisting essentially of:

98.7 percent by mass to 99.8 percent by mass of zinc,

0.01 percent by mass or more and 0.7 percent by mass or less of bismuth,

1 ppm or less of antimony,
70 ppm or less of lead, and
20 ppm or less of cadmium.

14. (New): The zinc can of claim 13, wherein the cross-sectional metal structure of the can wall consists of crystals having an average grain diameter ranging from 8 μm to 25 μm ;

wherein said average grain diameter may be determined from a cut in the direction of height and thickness and measured on a projected image of the crystals on a horizontal line in a thick direction of the can which average grain diameter is computed out.

15. (New): The zinc can of claim 13, wherein the crystals have an O/I ratio ranging from 1.0 to 1.4;

where O represents an average grain diameter of the crystals existing vertically epitaxial to the height direction on a cross section of the can cut in the height and the thickness direction in a range of 200 μm from the outer surface of the can wall, and

where I represents the average grain diameter of the crystals existing in a cross section within 200 μm from the inner surface, being said diameters measured on a projected image of the crystals on a horizontal line in the thickness direction, which average value for O and I being computed out.

16. (New): The zinc can of claim 13, wherein said zinc can is formed by pressing within the temperature range of 120-180°C.

17. (New): A battery comprising:
the zinc can of claim 1 as an anode; and
a cathode.

18. (New): The battery of claim 16 that is a manganese dry battery.

19. (New): The manganese dry battery of claim 18, wherein the cathode comprises
at least one material selected from the group consisting of natural manganese dioxide and
electrolytic manganese dioxide.